

**Sooley, Jodi**

---

**From:** Werre, Mary  
**Sent:** June 20, 2014 03:03 PM  
**To:** Grushman, Andrei  
**Subject:** FOR APPROVAL: COB Today - Briefing to the External Audit Committee Members - Review of the Confidential Human Sources Program  
**Attachments:** Air Cargo Program Overview CBPD 05-22-2014 v4.pptx  
**Importance:** High

Hi Andrei,

Another call letter for your approval. ☺

-Mary

---

**From:** Murray, William  
**Sent:** June 20, 2014 2:54 PM  
**To:** Grushman, Andrei  
**Cc:** Mandelzys, Rivi; Bourgeois, Alain; Piasko, Paul; Werre, Mary  
**Subject:** FW: BF July 3, 2014 - Briefing to the External Audit Committee Members - Review of the Confidential Human Sources Program  
**Importance:** High

I approve.

W.

---

**From:** Mandelzys, Rivi  
**Sent:** June 20, 2014 10:13 AM  
**To:** Murray, William  
**Cc:** Zawada, Beverly  
**Subject:** BF July 3, 2014 - Briefing to the External Audit Committee Members - Review of the Confidential Human Sources Program  
**Importance:** High

Hi Will,

Please see the email below, for your review approval and forwarding.

Thanks  
-Rivi

---

**Subject:** BF July 3, 2014 - Briefing to the External Audit Committee Members - Review of the Confidential Human Sources Program

To: Soper, Lesley L

CC: McLeod, Adam Sharp, Matthew; PPCD\_DGO-DPPC\_BDG; Grushman, Andrei; Mandelzys, Rivi; Murray, William

Lesley,

The Review of the Confidential Human Sources Program is scheduled for discussion and approval at the next Audit Committee meeting on July 22, 2014.

As per IAPED's email below, please prepare an Overview of the Confidential Human Sources Program deck for the "Briefings to External Audit Committee Members" meeting scheduled on the afternoon of July 21, 2014. As an example, we have also attached a recently prepared Overview of the Air Cargo Program.

Finalized presentation in both official languages are required in IAEPD by close of business Wednesday, July 9, 2014.

Please provide the material and the names of those presenting the deck by **Thursday, July 3<sup>rd</sup>** to Andrei Grushman with a cc to William Murray and Rivi Mandelzys. This will allow the necessary time for VP review, approval and briefing if necessary.

Thank you

**Tim Coughlin**

Director General | Directeur général  
Program Policy and Coordination Directorate | Direction des politiques des programmes et de la coordination  
Programs Branch | Direction générale des programmes  
Canada Border Services Agency | Agence des services frontaliers du Canada  
191 Laurier Avenue West, Ottawa ON K1A 0L8  
613-946-3183 | facsimile/télécopieur: 613-952-2468  
[Tim.Coughlin@cbsa-asfc.gc.ca](mailto:Tim.Coughlin@cbsa-asfc.gc.ca)  
Government of Canada | Gouvernement du Canada



Canada Border  
Services Agency | Agence des services  
frontaliers du Canada

---

**From:** Ducharme, Marianne On Behalf Of Palamedes, Dena  
**Sent:** June-19-14 05:52:13 PM (UTC-05:00) Eastern Time (US & Canada)  
**To:** Wex, Richard; Bolduc, Martin; Soper, Lesley L; Leckey, Geoff  
**Cc:** Blanchard, NathalieX; Patrice, France; Walker, Donald; Brown, Antoinette; Lenahan, Shannon; Thouin, Marianne; Blair, Claudette; Palamedes, Dena; Ducharme, Marianne; Schnobb, Sylvie  
**Subject:** July 21, 2014 - Briefing to the External Audit Committee Members - Review of the Confidential Human Sources Program

Richard, Martin, Lesley, Geoff

The Review of the Confidential Human Sources Program is scheduled for review and approval at the next Audit Committee meeting on July 22, 2014.

As you know, briefings related to topics going forward at the Audit Committee are provided to the External AC Members prior to the Audit Committee meeting. As such, you are scheduled to present an Overview of the Confidential Human Sources Program at the "Briefings to External Audit Committee Members" meeting scheduled on the afternoon of July 21, 2014. We have reserved 35 minutes for your presentation. Please advise us, if you would require additional time.

Your DG lead is welcome at this briefing. Please let us know who will be accompanying you/presenting.

Please ensure to coordinate your briefing with other responsible branches, when appropriate.

**We will require your finalized presentation in both official languages by close of business Wednesday, July 9, 2014.** The exact time of the presentation will be confirmed shortly, and the final agenda will be sent to you closer to the meeting.

If you have any questions or require further clarification, please do not hesitate to contact me or Sylvie Schnobb, Audit Committee Coordinator at 613-941-7666.

Regards,

**Dena Palamedes**, CPA, CMA, CIA, CFE, CCSA, CRMA  
Director General / Directrice générale  
Internal Audit and Program Evaluation Directorate / Direction de la vérification interne et de l'évaluation des programmes  
Canada Border Services Agency / Agence des services frontaliers du Canada  
410 Laurier Ave. W. 11th Floor / 410 Ave. Laurier ouest, 11ième étage  
Ottawa, ON K1A 0L8  
Telephone | Téléphone: 613-941-7216  
Facsimile | Télécopieur 613-957-6411  
E-mail | Courriel : [Dena.Palamedes@cbsa-asfc.gc.ca](mailto:Dena.Palamedes@cbsa-asfc.gc.ca)  
Government of Canada | Gouvernement du Canada



Canada Border  
Services Agency

Agence des services  
frontaliers du Canada



# Air Cargo Program Overview

**External Audit  
Committee Briefing  
June 16, 2014**

PROTECTION SERVICE INTEGRITY  
TY PROTECTION SERVICE INT  
ÉGRITÉ PROTECTION SERVICE  
INTEGRITY PROTECTION SERVI  
CE INTÉGRITÉ PROTECTION SE  
RVICE INTÉGRITÉ PROTECTION  
SERVICE PROTECTION  
ON SERVICE PROTECTION  
ECTION SERVICE INTÉGRITÉ PR  
OTECTION SERVICE INTÉGRITÉ  
PROTECTION SERVICE INTÉGRITÉ  
TÉ PROTECTION SERVICE INT  
TEGRITY PROTECTION SERVICE  
INTÉGRITÉ PROTECTION SERVI  
CE INTEGRITY PROTECTION SE



PROTECTION • SERVICE • INTEGRITY

Canada



## Purpose

- To provide an overview of the Canada Border Services Agency (CBSA) Air Cargo Program:
  - Advance Commercial Information (ACI)
  - Targeting/Risk Assessment
  - Examination and Detection Tools
  - Final Release Determination
  - Performance Monitoring & Reporting
  - Business Transformation Initiatives



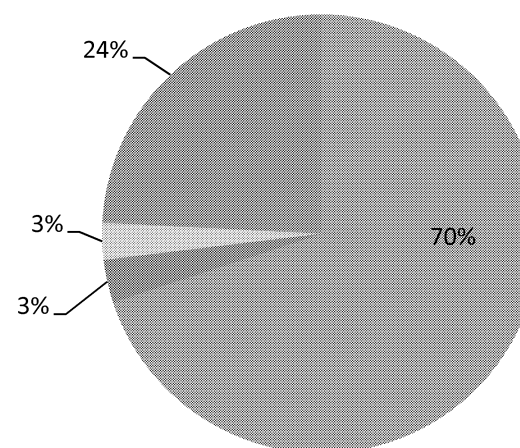
## Air Cargo Program Overview

- The Air Cargo Program exists to ensure Canada's security and prosperity are protected through the identification and interdiction of high-risk and/or inadmissible goods entering, transiting, or exiting Canada while facilitating the movement of compliant shipments

### Commercial Releases - FY2013-2014

■ Highway ■ Marine ■ Rail ■ Air

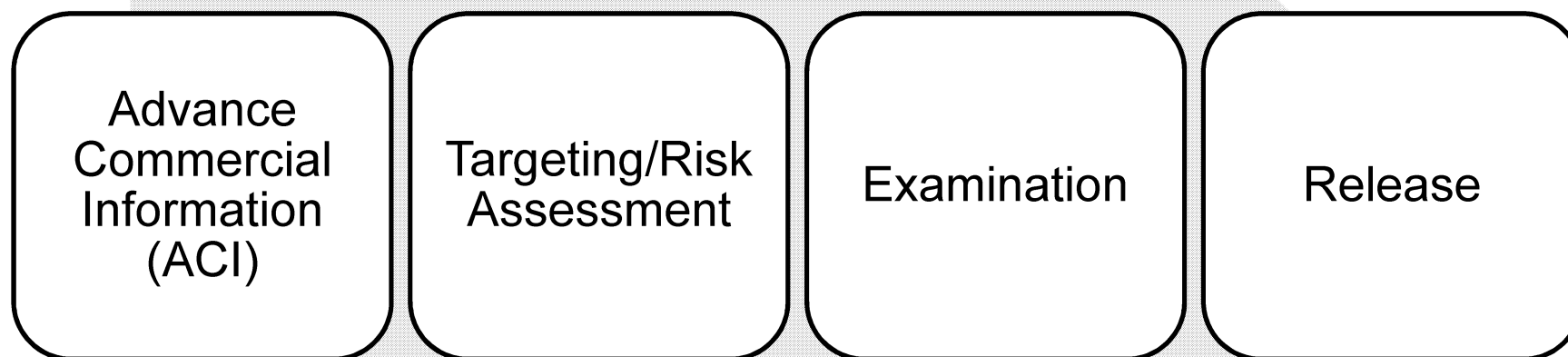
- Commercial air cargo services are provided at 13 international airports.
- In FY 2013/2014, air cargo imports represented 24% of the 14.2M shipments imported through the commercial stream (all modes).





# Air Cargo Import Process

There are 4 main components within the Air Cargo Program





# Advance Commercial Information

## Section 12.1, Customs Act

- Implemented in 2006, carriers and freight forwarders are required to electronically transmit ACI to the CBSA 4 hours prior to arrival of the conveyance in Canada or “wheels up”.
- The provision of ACI “pushes the border out” by providing the CBSA with sufficient cargo and conveyance data in advance, thereby enabling the CBSA to identify high-risk goods and conveyances as early as possible in the trade continuum.
- This benefits the trade community by enabling the CBSA to focus its examination and interdiction activities on high-risk goods, thereby facilitating the entry of low-risk goods.
- Compliance verification on the advance commercial information is done post-arrival.





## Targeting/Risk Assessment

- Air targeting/risk assessment activities are centralized at the CBSA's National Targeting Centre (NTC).
- Air targeting identifies suspected high risk (health, safety and security threats) goods and conveyances through an integrated, comprehensive targeting program that effectively uses intelligence products and technology to support the CBSA's mandate.
- 100% of the cargo data submitted is risk assessed by the CBSA prior to an aircraft's arrival.



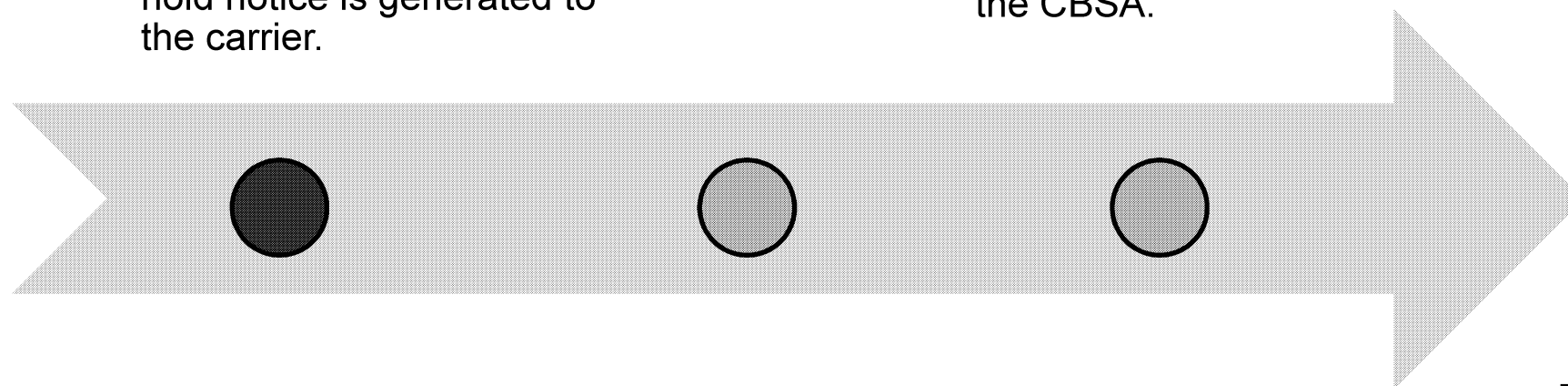
# Targeting/Risk Assessment Process

## Prior to Arrival

- ACI data is compared against enforcement databases and risk indicators.
- Targeting officers risk assess cargo for health, safety and national security threats.
- If necessary, a Request for Information is issued and a hold notice is generated to the carrier.

## Arrival in Canada

- Targeted high-risk goods are held for examination upon arrival.
- Examination results are gathered and analyzed.
- This information is used to develop and maintain risk indicators in order to improve the risk assessment capability of the CBSA.

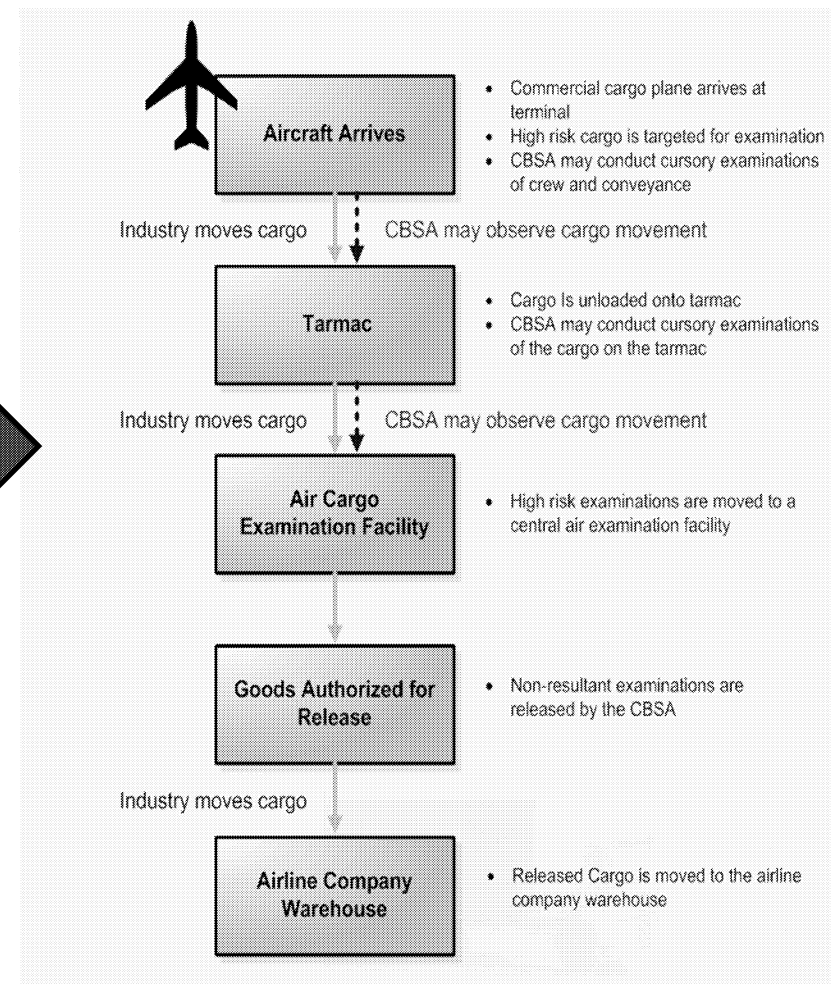
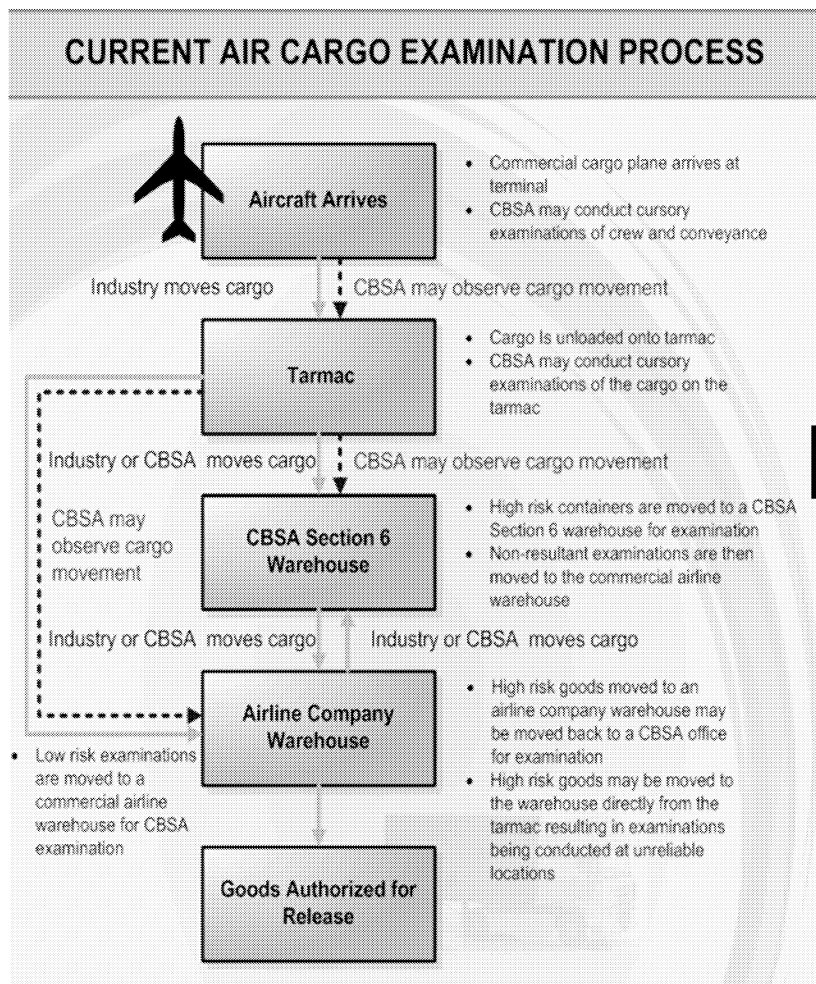




# Commercial Air Examination Flow Model

## Current State Flow

## Future State Flow





# Examination

## Section 99 of Customs Act

- The CBSA's examination program is necessary to protect Canadians against health, economic, safety and security threats.
- Examinations are conducted to confirm:
  - Suspected national health, safety and security threats
  - Presence of contraband/prohibited goods
  - Compliance with the laws and regulations administered by other government departments (OGDs) (ex: live animals, soil, insects, explosives)
  - Program integrity/Commercial compliance (e.g. ensure true, accurate and complete data, marking of goods, origin, valuation, classification)
- Authorities extended under designation of Custom Controlled Areas has been implemented at 3 major airports (October 2013) and enforcement of such authorities came into effective April 2014.



## Examination - continued

- First Point of Arrival
  - CBSA may conduct a cursory examination of the crew and conveyance, upon arrival at an authorized airport of entry. A high risk conveyance may undergo a more intensive examination.
  - Industry moves the cargo to the tarmac, which CBSA may observe.
  - The cargo is unloaded onto the tarmac, where CBSA may examine it.
  - Then the cargo is either moved to a Section 6 CBSA warehouse or an airline carrier's warehouse, either by the CBSA or by industry, in which case the CBSA may observe the movement.



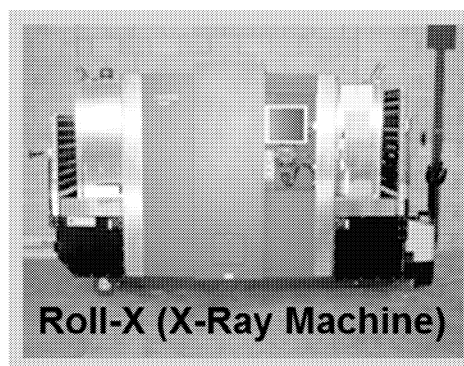
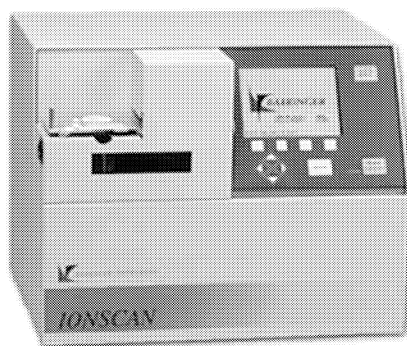
## Examination - continued

- CBSA examines the cargo at the Section 6 CBSA or airline carrier's warehouse.
  - High Risk Cargo should be examined at a Section 6 CBSA warehouse. In the case of non-resultant exams, the cargo is then moved to the airline carrier's warehouse. CBSA authorizes the goods for release or in-bond movement.
  - Low Risk Cargo can be examined at the airline carrier's warehouse. In the case of non-resultant exams, CBSA authorizes the goods for release or in-bond movement.
- In the case of resultant exams, enforcement actions are taken.
- Examination for low risk goods may also occur at an inland sufferance warehouse.



## Detection Tools

- Detection Tools used in the air mode assist to increase the efficiency and effectiveness of examinations.
- Such tools provide Border Services Officers the capability of conducting non-intrusive examinations to identify anomalies of potential high risk shipments.
- The CBSA has a wide range of detection tools including: Small Scale Imaging, Trace Detection, Radiation Detection, Detector Dogs, and other equipment.





# Final Release Determination

## Section 31 and 32 of Customs Act

- The importer or their authorized licensed customs broker, submits the required release information, in order for a final release determination of the goods to be made by the CBSA.
- Air shipments are not eligible for release until all concerns identified through the targeting/risk assessment and examination processes have been addressed.
- 95% of release requests presented are submitted electronically (with some exceptions for paper requests) and may be submitted before arrival, at arrival, or post arrival.
- Release of goods may be authorized prior to the collection of duties and taxes by posting security with the CBSA "Release Prior to Payment Privileges" (approximately 97%)
- Once a release is made, shipment is no longer under customs control and it cannot be examined without reasonable grounds to believe that there is something suspicious.





## Performance Monitoring & Reporting

- An ongoing statistical monitoring and review process assesses the current and historical state of examinations conducted regionally and by port of entry.
- The performance of the examination program is further monitored through the assessment of enforcement actions (results) in relation to the number of examinations conducted.
- To ensure accurate reporting, in order to base statistical analysis, a monitoring process is also in place to evaluate the accuracy of examination results within CBSA systems.
- A selection of examination results are reviewed and issues/concerns identified are disseminated regionally as well as addressed through policy, training, bulletins, etc.



# Business Transformation Initiatives

- Pre-Load Air Cargo Targeting (PACT)
  - Partnering with Transport Canada and several voluntary air carriers, a pilot is currently being conducted whereby participating carriers provide cargo data prior to loading onto aircraft (versus providing 4 hours prior to arrival/wheel's up).
  - This aims to negate national security and/or aviation security risk prior to loading cargo onto aircraft.
- Cargo Control and Suffrance Warehouse Modernization
  - This will include reducing the types of warehouses from 14 to 1, where CBSA personnel will be on-site to conduct commercial examinations; thus eliminating the need for Border Services Officers to travel from CBSA offices to CBSA approved warehouses.
- Commercial Release Strategy
  - Options for release modernization are being assessed



## Business Transformation - continued

- eManifest
  - In addition to carriers and freight forwarders providing advance information for risking purposes, importers will also be required to provide advance information enhancing targeting abilities.
  - There will be improved data collection for monitoring examination results.
- Customs Controlled Areas
  - Phase II implementation at the remaining authorized airports of entry (Fall 2014)
  - Enforcement at those locations (Spring 2015)



# Contact Information

**Rachel Auclair**

Director

Commercial Border Programs Division

Border Programs Directorate

Programs Branch

[Rachel.Auclair@cbsa-asfc.gc.ca](mailto:Rachel.Auclair@cbsa-asfc.gc.ca)

## Sooley, Jodi

---

**From:** Coughlin, Tim  
**Sent:** April 23, 2014 06:12 PM  
**To:** Grushman, Andrei  
**Subject:** Re: Data analytics - PPTF discussion paper

Great!

---

Sent from my BlackBerry handheld.  
Envoyé à partir de mon BlackBerry.

---

**From:** Grushman, Andrei  
**Sent:** Wednesday, April 23, 2014 06:01 PM  
**To:** Coughlin, Tim  
**Subject:** FW: Data analytics - PPTF discussion paper

Tim,

Had a good discussion with Gino's advisor (Erica Ren). I've sent her six or seven key documents and have invited her to a meeting tomorrow afternoon with Gartner and eManifest.

She will put together a one or two-page "framework" for discussion with you and Gino tomorrow. You'll like it.

Andrei

Andrei Grushman  
Director | Directeur  
Program Improvements Division | Division de l'amélioration des programmes  
Strategic Risk & Modernization Directorate | Direction de l'évaluation stratégique des risques et de la modernisation  
Programs Branch | Direction générale des programmes  
Canada Border Services Agency | Agence des services frontaliers du Canada  
191 Laurier Avenue West, Ottawa ON K1A 0L8  
613-948-8823 | facsimile/télécopieur: 613-952-2468  
[Andrei.Grushman@cbsa-asfc.gc.ca](mailto:Andrei.Grushman@cbsa-asfc.gc.ca)

---

**From:** Grushman, Andrei  
**Sent:** April-23-14 5:34 PM  
**To:** Ren, Erica  
**Subject:** Data analytics - PPTF discussion paper

Here's our task force discussion paper. It was shared with ISTB DGs for comments, including Gino's directorate. The final version was tabled at the ADM committees in mid-December, along with the deck.

Andrei Grushman  
Director | Directeur  
Program Improvements Division | Division de l'amélioration des programmes  
Strategic Risk & Modernization Directorate | Direction de l'évaluation stratégique des risques et de la modernisation  
Programs Branch | Direction générale des programmes  
Canada Border Services Agency | Agence des services frontaliers du Canada  
191 Laurier Avenue West, Ottawa ON K1A 0L8  
613-948-8823 | facsimile/télécopieur: 613-952-2468  
[Andrei.Grushman@cbsa-asfc.gc.ca](mailto:Andrei.Grushman@cbsa-asfc.gc.ca)



**Sooley, Jodi**

---

**From:** Baklid, Bente  
**Sent:** April 23, 2014 03:58 PM  
**To:** Imrie, Megan; Boyd, Beverley; Vinette, Denis R.; Bedard, Raymond; Grushman, Andrei; Pucar, Lori  
**Cc:** Palamedes, Dena; Lovely, Julie; Obembe, Tomi; Porzuczek, Jeremy; Bessette, Michael; Lenahan, Shannon; Ducharme, Marianne  
**Subject:** FW: Small and Remote Ports of Entry Evaluation - Revised Recommendations

Good afternoon,

In follow-up to our Small and Remote Ports of Entry Evaluation meeting, below are the revised recommendations.

**Recommendation 1: The Vice-President of the Programs Branch, in consultation with the Operations Branch, develop performance measures for SRPOEs and start collecting performance data that contributes to effective decision making.**

**Recommendation 2: The Vice-President of the Programs Branch, in consultation with the Operations Branch, develop criteria for determining the types of services offered and service delivery models for SRPOEs.**

Thanks for the comments you provided at the meeting and I look forward to receiving your written feedback tomorrow.

Bente

Bente Baklid  
Director / Directrice  
Program Evaluation / Évaluation des programmes  
Internal Audit and Program Evaluation Directorate /  
Direction de la vérification interne et de l'évaluation des programmes  
Canada Border Services Agency / Agence des services frontaliers du Canada  
191 Laurier W Avenue / 191, avenue Laurier O., 14th Floor / 14<sup>e</sup> étage  
Ottawa, ON. K1A 0L8  
[bente.baklid@cbsa-asfc.gc.ca](mailto:bente.baklid@cbsa-asfc.gc.ca)  
Tel / Tél: (613) 954-7280  
Fax / Télécopieur : (613) 941-3663  
Téléimprimeur | Teletypewriter : 1-866-335-3237



Canada Border  
Services Agency

Agence des services  
frontaliers du Canada

## Sooley, Jodi

---

**From:** Brulotte, Brenda  
**Sent:** April 23, 2014 03:57 PM  
**To:** McBride, Ron  
**Cc:** Grushman, Andrei; Coughlin, Tim; Joannette, Andre  
**Subject:** FW: SAP - Business Intelligence & Data Warehouse  
**Attachments:** PPSC Dec 9 2013 v3.1.pptx

Ron,

Please refer to Andrei's e-mail below. I saw this presentation a while back and while the focus is on the operational end, there is provision for CAS information (slide 11 top of page) at some point in the future. While I agree that we will not be able to mine our BW for performance data until 2015-2016, I encourage you to touch base with him to keep in the loop on progress.

Sincerely,

Brenda Brûlotte, CPA (Can/US), MBA-ITM  
Agency Comptroller and Director General  
Contrôleur de l'agence et directeur général  
Canada Border Services Agency  
Agence des services frontaliers du Canada

---

**From:** Grushman, Andrei  
**Sent:** April 23, 2014 3:49 PM  
**To:** Brulotte, Brenda  
**Cc:** Coughlin, Tim; Joannette, Andre; Beaubien, Ken  
**Subject:** SAP - Business Intelligence & Data Warehouse

Hi Brenda,

Claude Rochette and Andre Joannette have suggested that I contact you. As part of our Program Performance Action Plan, I'm preparing a report on business intelligence, data warehousing, and data governance from the perspective of program performance measurement (*please see attached deck*).

I understand that you are leading Comptrollership's initiative to develop a data warehouse and business intelligence capacity in SAP. I'd appreciate any background information you can provide on this initiative, and would be glad to provide further background information on our project.

I would be glad to meet with you and/or your colleagues at your convenience.

Thanks.

Andrei

**Andrei Grushman**  
Director | Directeur



Program Improvements Division | Division de l'amélioration des programmes  
Strategic Risk & Modernization Directorate | Direction de l'évaluation stratégique des risques et de la modernisation  
Programs Branch | Direction générale des programmes  
Canada Border Services Agency | Agence des services frontaliers du Canada  
191 Laurier Avenue West, Ottawa ON K1A 0L8  
613-948-8823 | facsimile/télécopieur: 613-952-2468  
[Andrei.Grushman@cbsa-asfc.gc.ca](mailto:Andrei.Grushman@cbsa-asfc.gc.ca)



Canada Border  
Services Agency

Agence des services  
frontaliers du Canada



# Program Performance Action Plan

Program Performance Steering Committee (PPSC)  
December 9, 2013

WORKING DRAFT v. 3.1 – 09/12/13

PROTECTION SERVICE INTEGRITY INTÉ  
GRITÉ **PROTECTION** SERVICE INTEGRITY  
INTÉGRITÉ PROTECTION **SERVICE** INTEG  
RITY INTÉGRITÉ PROTECTION SERVICE  
**INTEGRITY** INTÉGRITÉ PROTECTION SER  
VICE INTEGRITY INTÉGRITÉ PROTECTION  
SERVICE INTEGRITY INTÉGRITÉ PROTEC  
TION SERVICE INTÉGRITÉ PRO  
TECTION SERVICE INTÉGRITÉ  
PROTECTION SERVICE INTÉGRITÉ  
GRITÉ PROTECTION SERVICE INTÉGRITÉ  
INTÉGRITÉ PROTECTION SERVICE INTEG  
RITY INTÉGRITÉ PROTECTION SERVICE  
INTEGRITY INTÉGRITÉ PROTECTION SER  
VICE INTEGRITY INTÉGRITÉ **PROTECTION**  
**SERVICE** INTEGRITY INTÉGRITÉ PROTE  
CTION SERVICE INTEGRITY INTÉGRITÉ SER  
VICE INTEGRITY INTÉGRITÉ PROTECTION



PROTECTION • SERVICE • INTEGRITY

Canada

# 1. Purpose

## **Progress report**

- Provide an update and outline the action plan to strengthen the Agency's program performance management.

## **Approval**

- Seek approval of Program Performance Action Plan.

## **Discussion**

- Review next steps.

## **2. Current Situation**

### **Governance**

- Existing data sources are disconnected
- Data extraction capabilities and tools not well-understood
- Need for improved data stewardship

### **Telling the Performance Story**

- Despite progress to date, there is a need for improved program performance indicators and a regular cadence to program performance reporting
- Lack of alignment between corporate, program, and operational reporting
- Analysts are scattered and at various levels of expertise

### **Data Quality and Accessibility**

- Key gaps in data quality (e.g. “closing the loop”)
- Need for reliable and user-friendly “portal” for access to key performance data and predictive analysis

## 3. Target State

### **Governance**

- Program performance management is central to all management processes and accountability commitments

### **Telling the Performance Story**

- Corporate Scorecard
- Professional-looking and regular standardized performance reports
- Single fully integrated performance measurement framework

### **Data Quality and Accessibility**

- Fully architected data warehouse and decision support system
- Highly-trained performance data analysts in key areas of the Agency
- Information visualization and advanced analytics

## 4. Action Plan - Summary

Continued Performance Report Production	Target Date
Table Q2 APS (Programs)	Jan 15, 16
Continue monthly Trends Report	Dec-13
Program Performance Report Q3	Feb-14
Corporate Scorecard	Feb-14
Governance	Target Date
DG Working Group on Corporate Scorecard established (2 sessions to date) (CAB)	Completed
Establish Program Performance Steering Committee (PPSC) and relevant working groups (PB)	Completed
Develop a detailed workplan which leverages and directs the performance measurement activities of the PMT (PB)	Dec-13
Conduct a study of program data governance which will review organizational roles and identify data stewards (PB/ISTB/CAB)	Mar-14
Presentation to SPPC	Dec-13
Telling the Performance Story	Target Date
<b>Strengthen the relevance of CBSA's key performance indicators and program alignment architecture (CAB/SRMD)</b>	
PMF for 2014-15 (CAB/PB)	Completed
Contribute to the development of the proposed corporate scorecard and complete new Program KPIs for 2014-15 (PB)	Feb-14
Incorporate functional budgets (COMPT/PB)	Feb-14
Complete the Program Alignment Architecture for 2015-16 (CAB/Programs)	Mar-14
Integrate the program and operational reporting suite (Programs and Ops)	Mar-14
Data Quality and Accessibility	Milestones
<b>Develop a "roadmap" for the CBSA's Business Intelligence platforms, aligned with the Border Modernization initiative (PB/ISTB/CAB)</b>	
Complete a "Program Performance - Requirements Study", which will provide a comprehensive review of CBSA requirements to 2020 (ISTB Consultations Unit) - Gartner	Mar-14
Integrate with current study of Business Intelligence for budgeting and forecasting (Comptrollership)	Jun-14
<b>Develop a user-friendly "portal" for access to key performance data by executives, analysts, and super-users (SRMD/ISTB/CAB)</b>	
Complete a "Web Dashboard" prototype using IBM consulting expertise to develop new executive reports in the CMRS toolkit	Mar-14
Examine feasibility of integrating data visualization and geo-spatial analysis into the Web Dashboard project	Mar-14

## 5. Governance



## 6. What is Business Intelligence?

Gartner defines **Business Intelligence (BI)** as the applications, infrastructure and tools, and best practices that enable access to and analysis of information to improve and optimize decisions and performance. The 15 components of BI include:

### Integration

- BI Infrastructure
- Metadata management
- Development tools
- Collaboration

### Information delivery

- **Reporting** (e.g. Program Performance Report)
- **Dashboards** (e.g. Programs APS)
- **Ad hoc query** (e.g. CMRS)
- Microsoft Office integration
- Search based BI
- Mobile BI

### Analysis

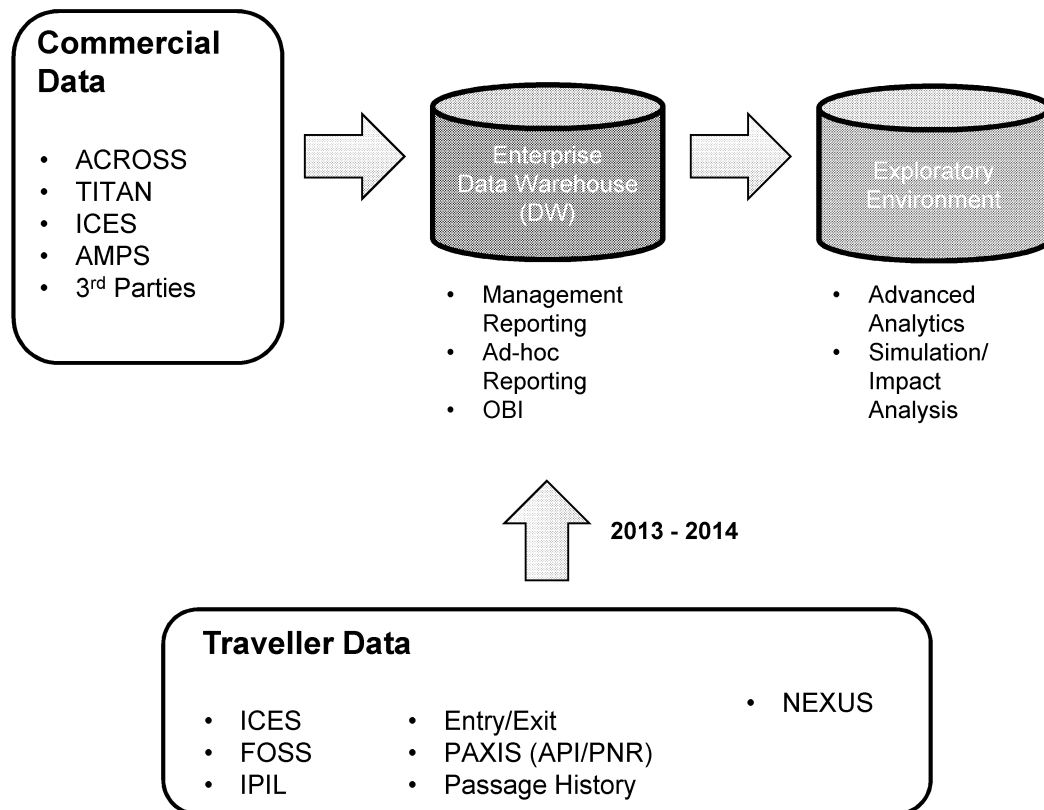
- **Online analytical processing** (e.g. eManifest)
- **Interactive visualization** (e.g. ISTB prototype, eManifest)
- **Predictive modelling and data mining** (e.g. Scenario Based Targeting, eManifest)
- **Scorecards** (e.g. corporate scorecard)
- Prescriptive modeling, simulation and optimization



## 7. Looking Ahead – An ideal state for data warehousing and BI

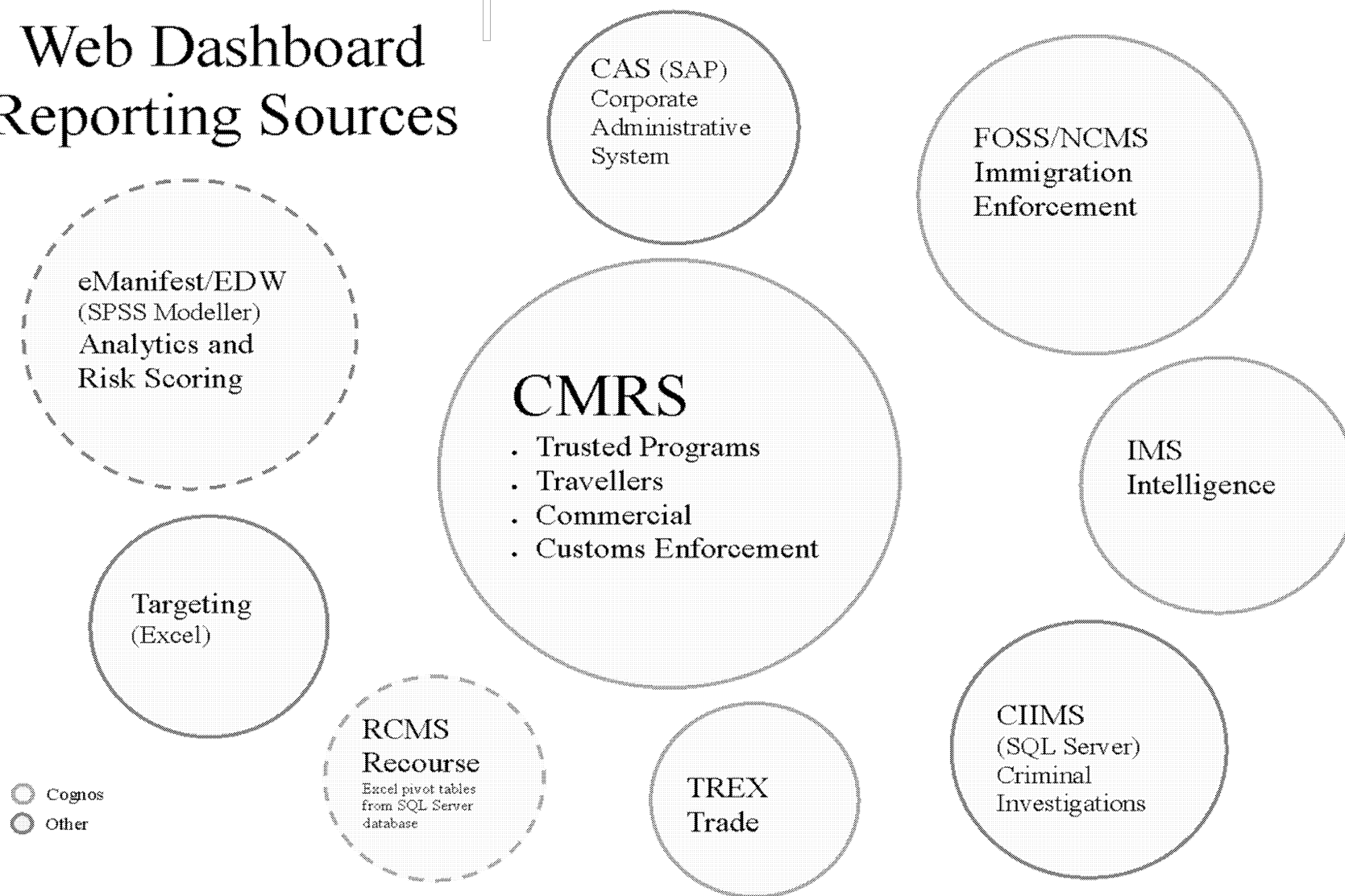
### Business Intelligence (BI) :

- Provides better planning abilities through predictive analytics
- Allows for Performance Management Reporting
- Allows for identification of anomalies in large data sets
- Allows for indicators to be developed, simulated and deployed in hours



## 8. Using Existing Tools

# Web Dashboard Reporting Sources



## 12. Next Steps

### **Strategic Policy and Program Committee**

- December 17.

### **Executive Committee**

- January 15-16.

### **Steering Committee** *(TBD)*

- a) Closing the loop: IT requirements
- b) Entry-Exit: Data Stewardship
- c) Program and Operational Reports: Harmonization
- d) CIC: Data Governance
- e) CATSA: Financial and operational data